

100

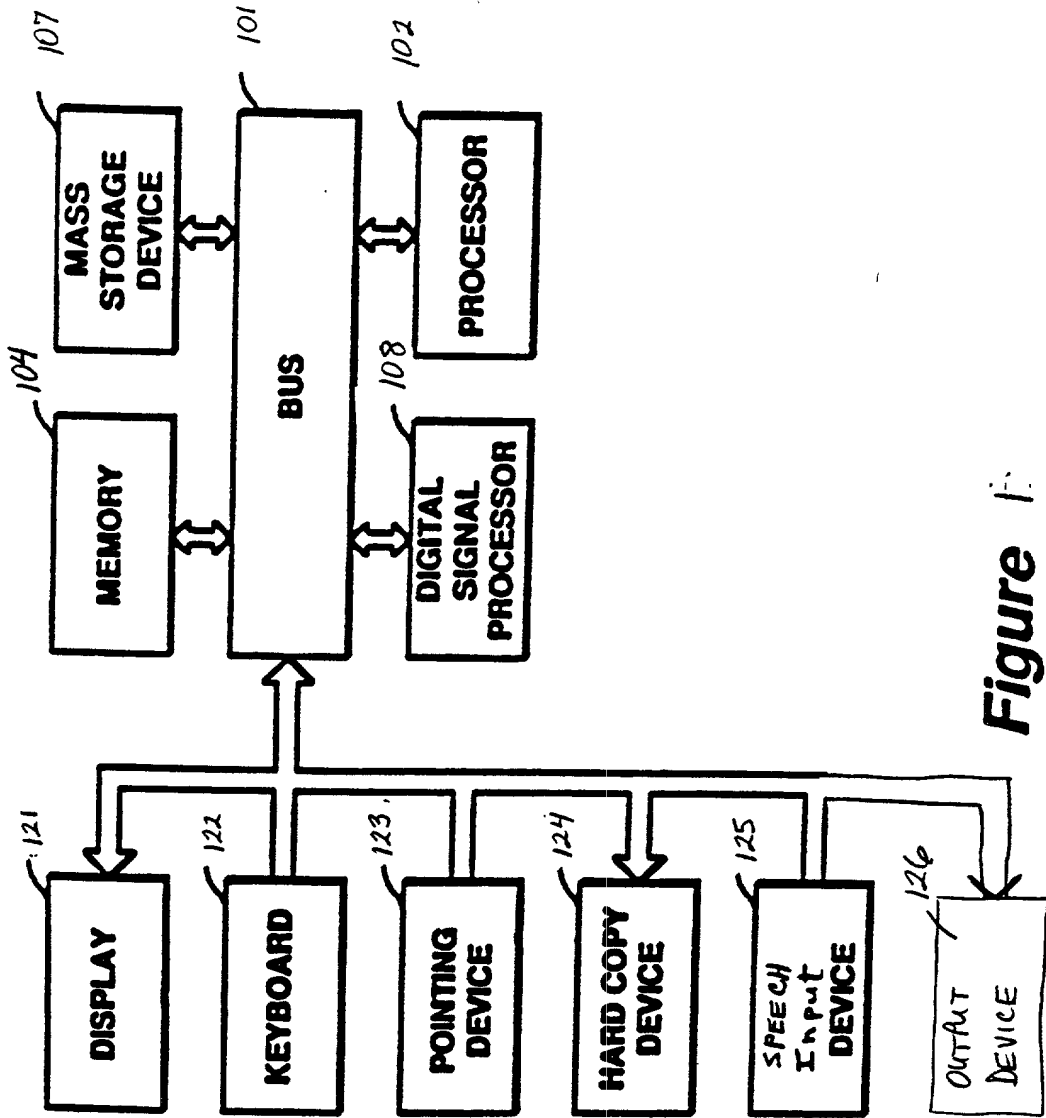


Figure 10

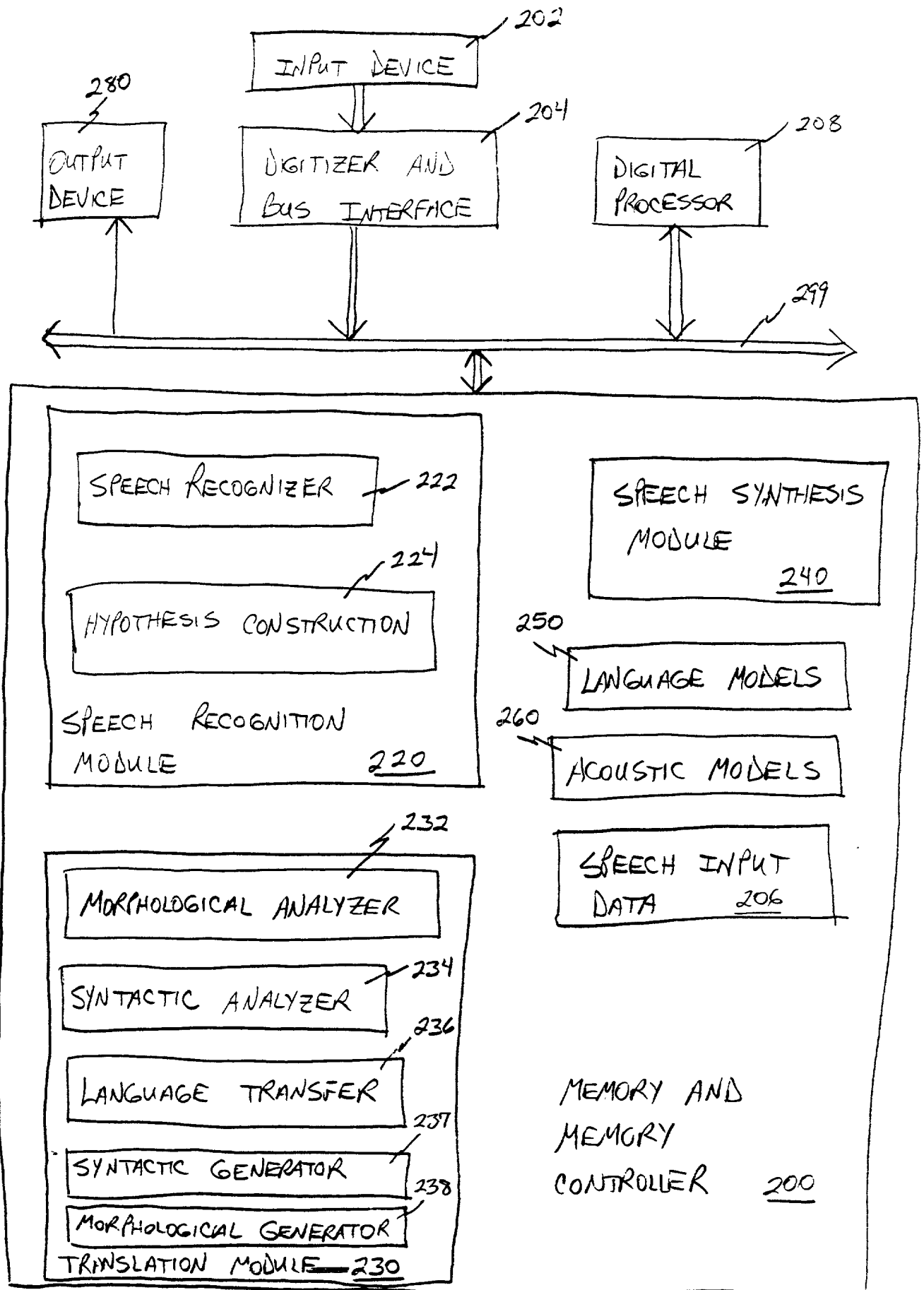


FIGURE 2

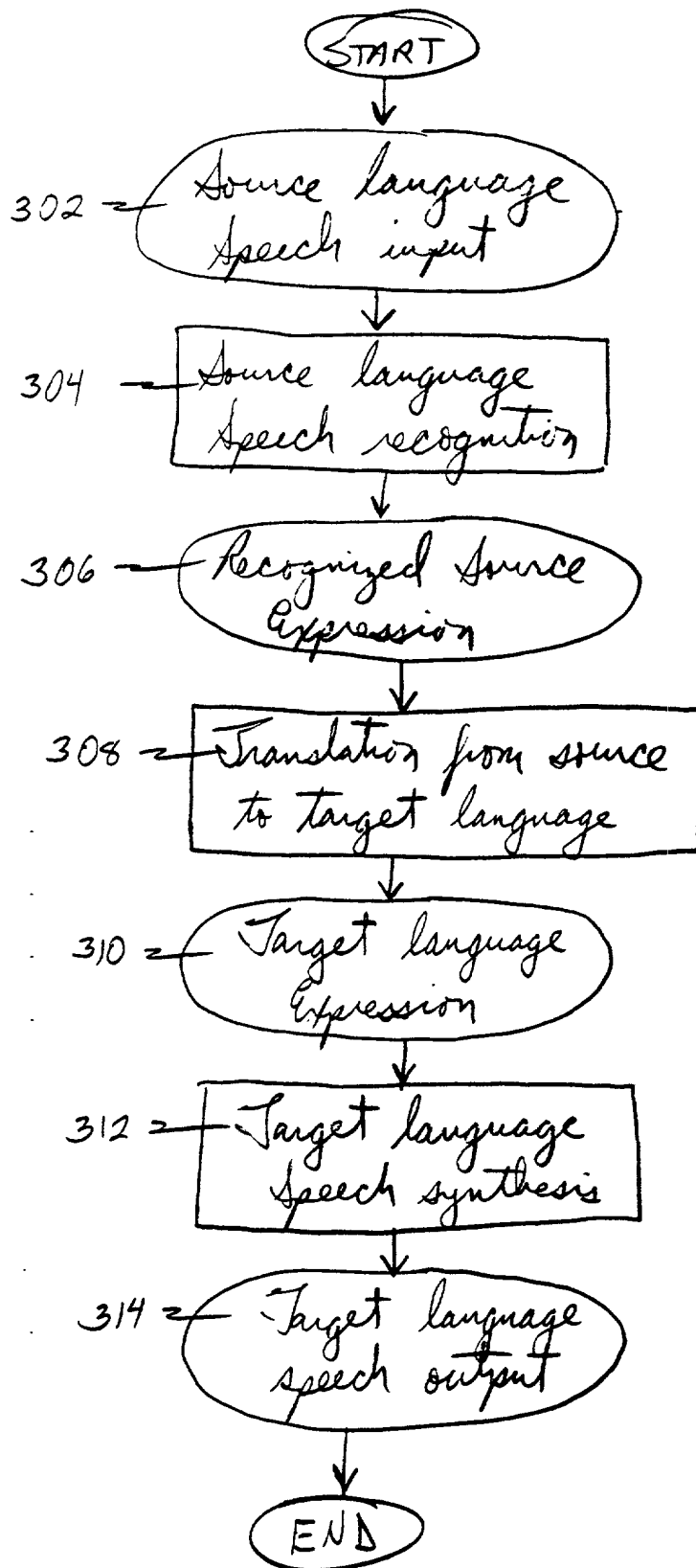


FIGURE 3

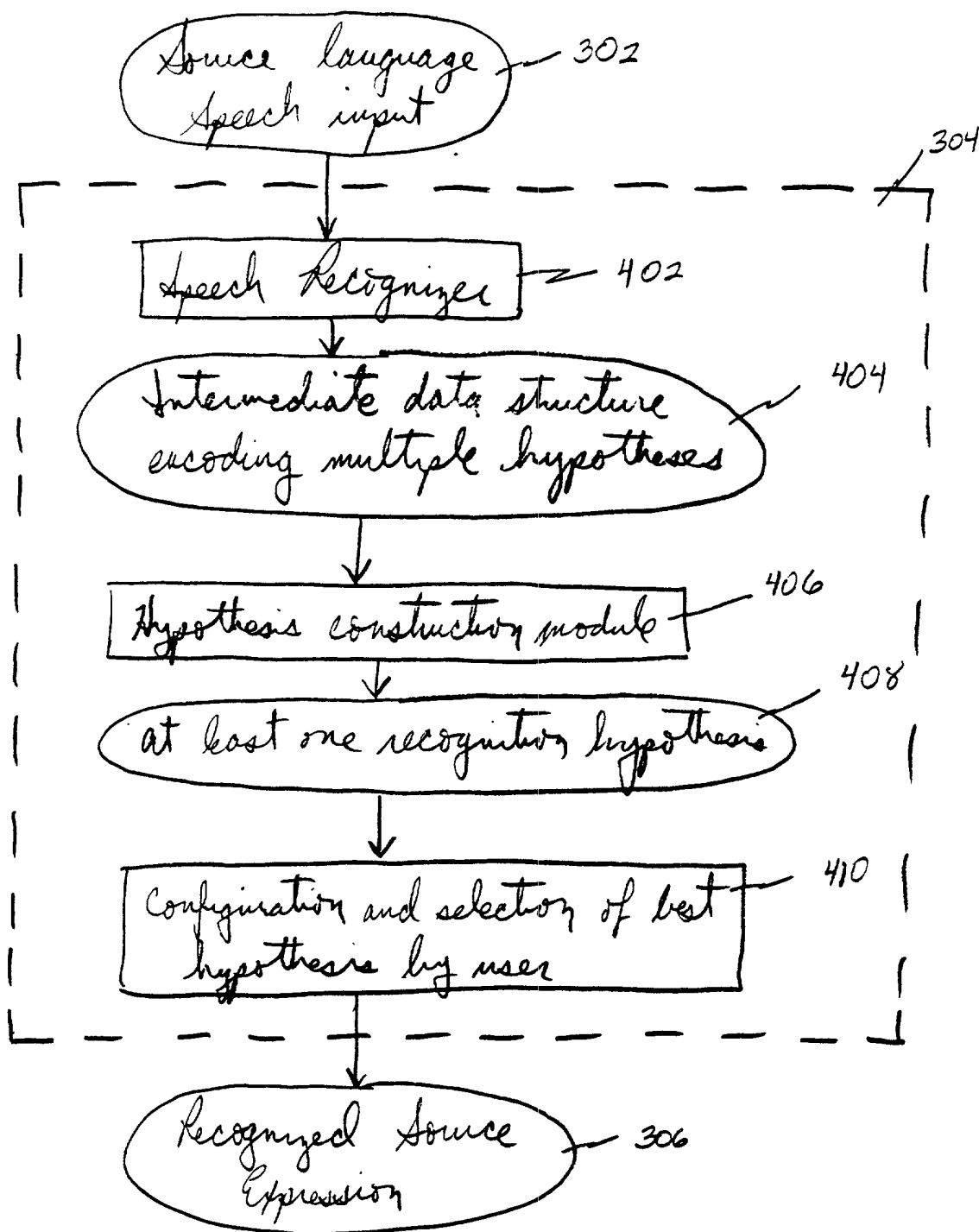


FIGURE 4

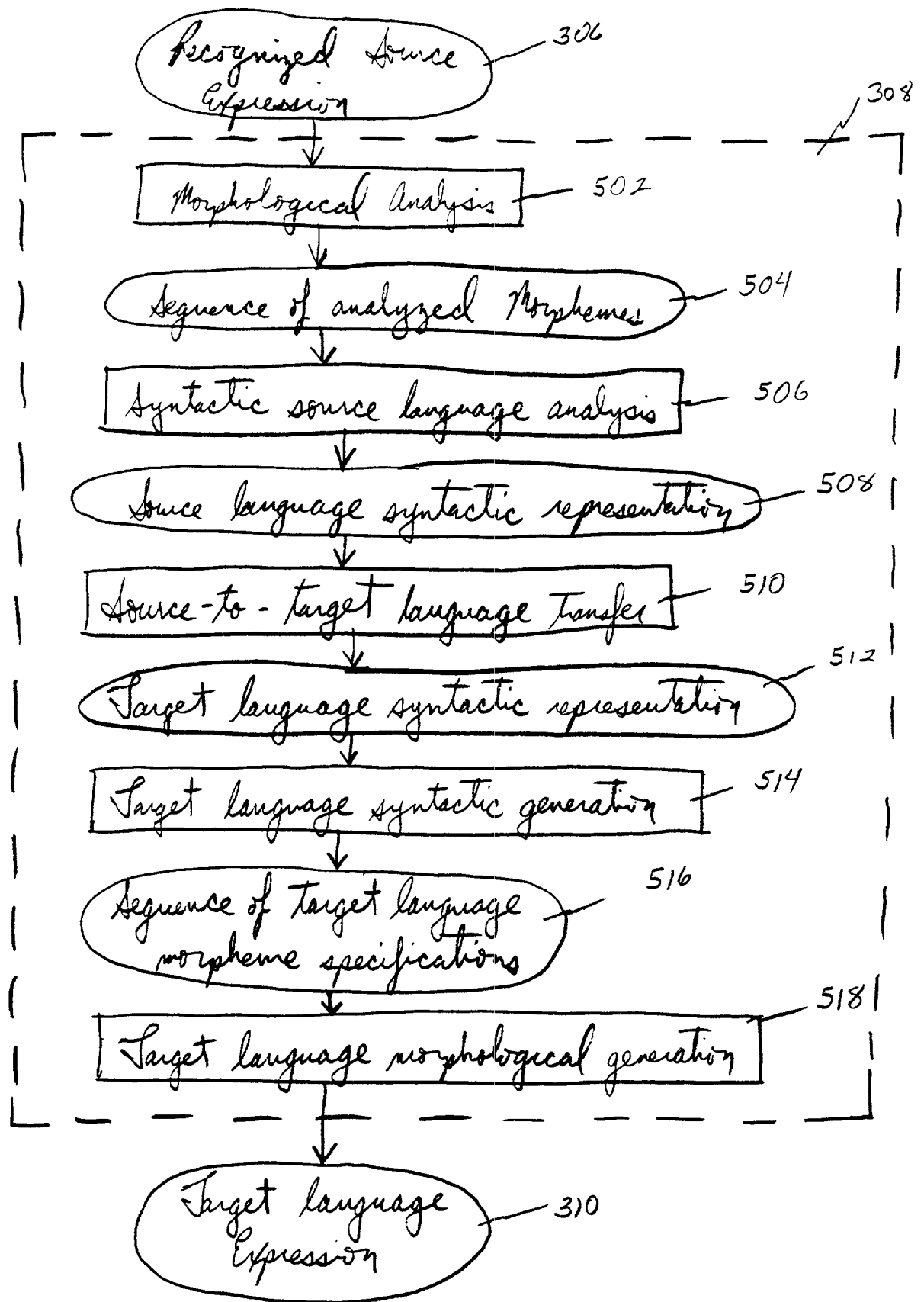


FIGURE 5



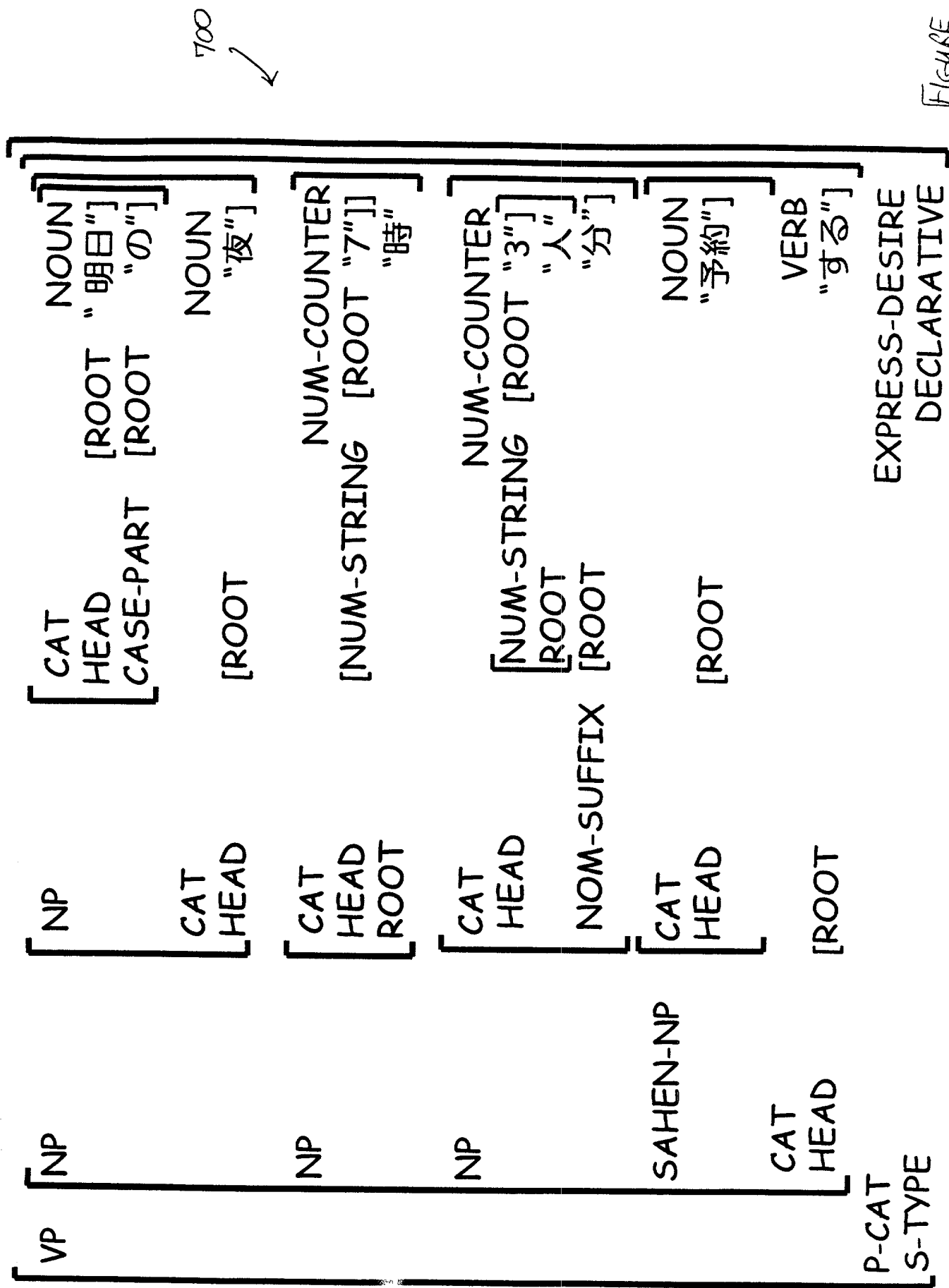


Figure 7

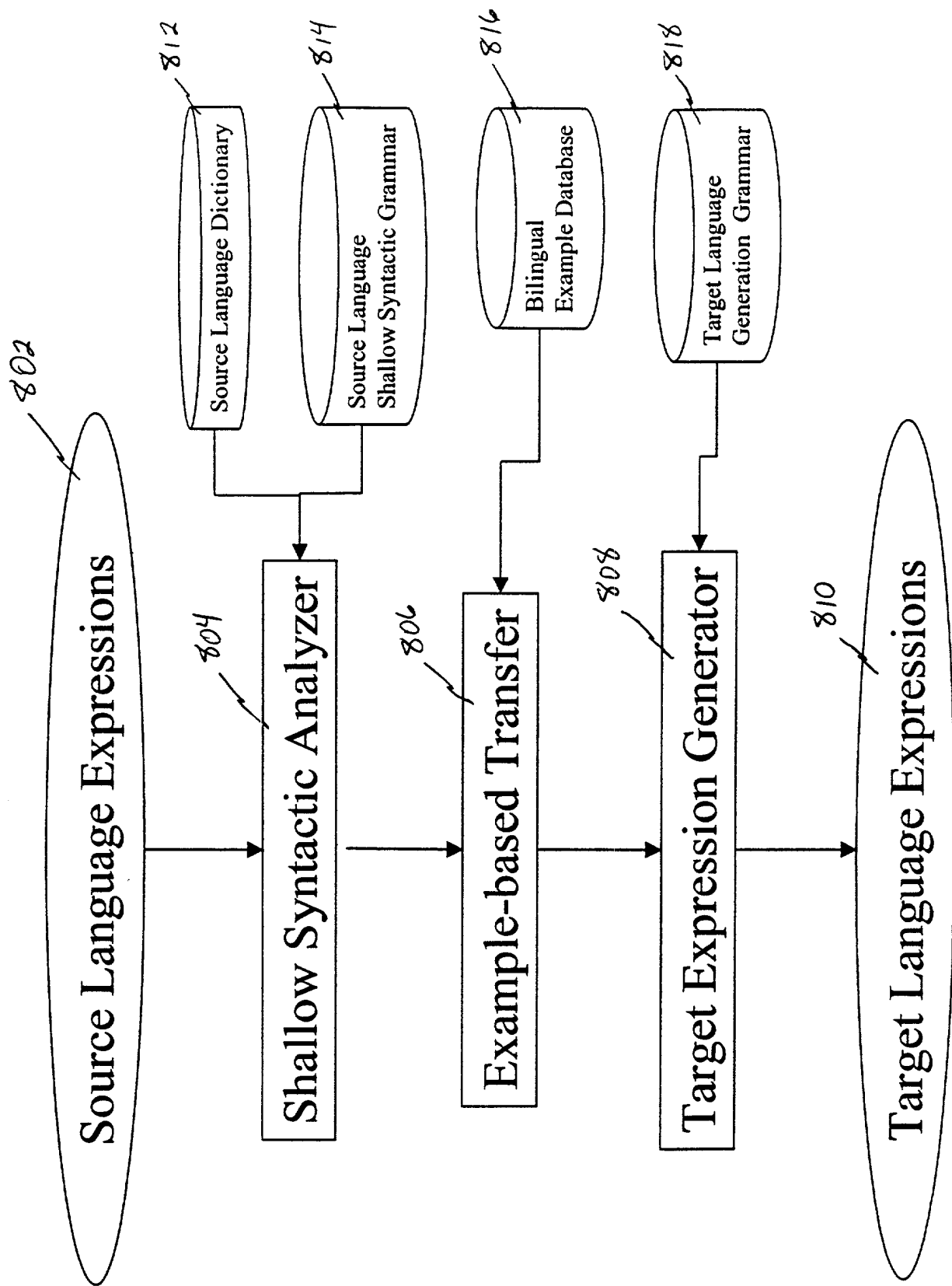


FIGURE 8



## Bilingual Example Database 900

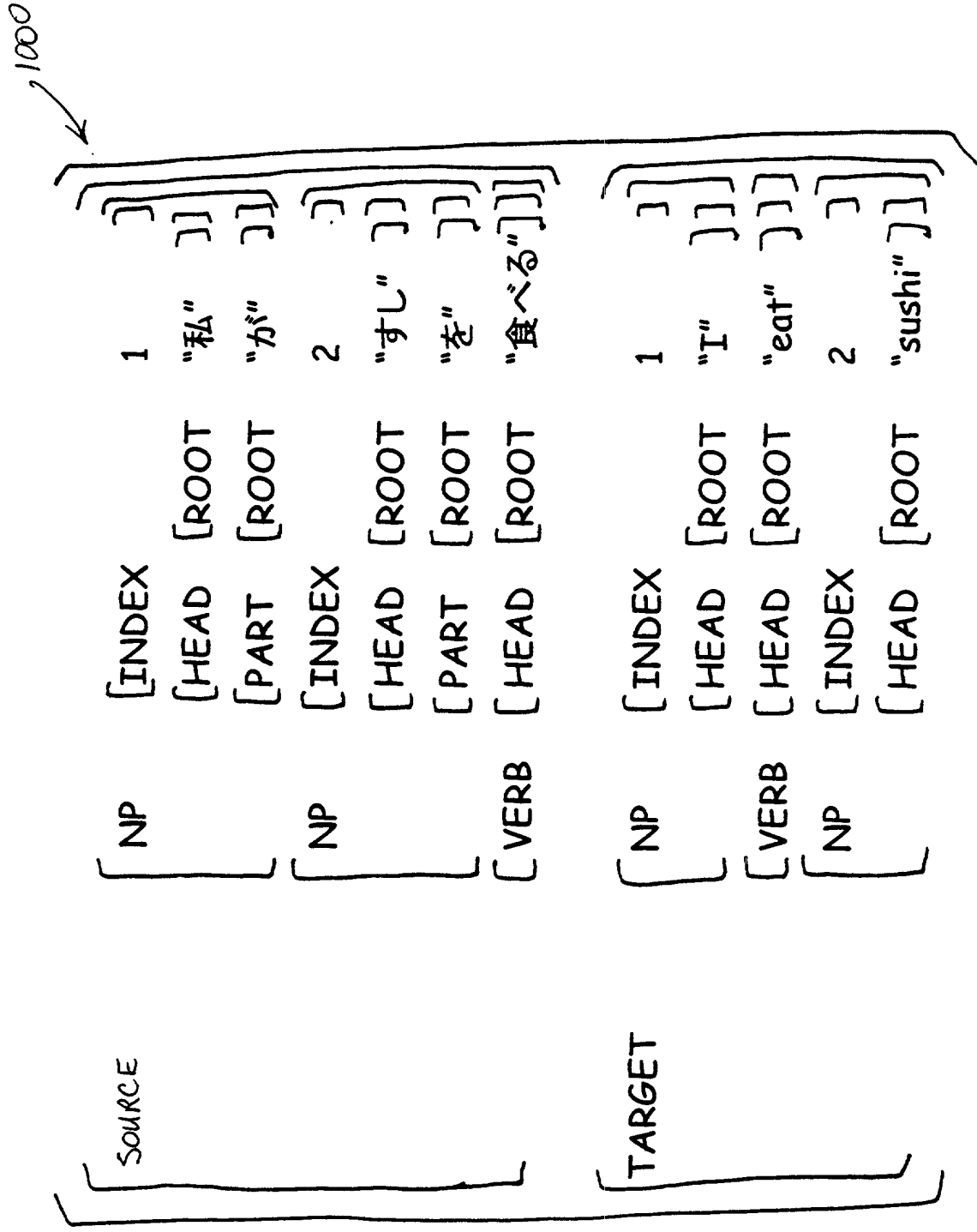


FIGURE 10

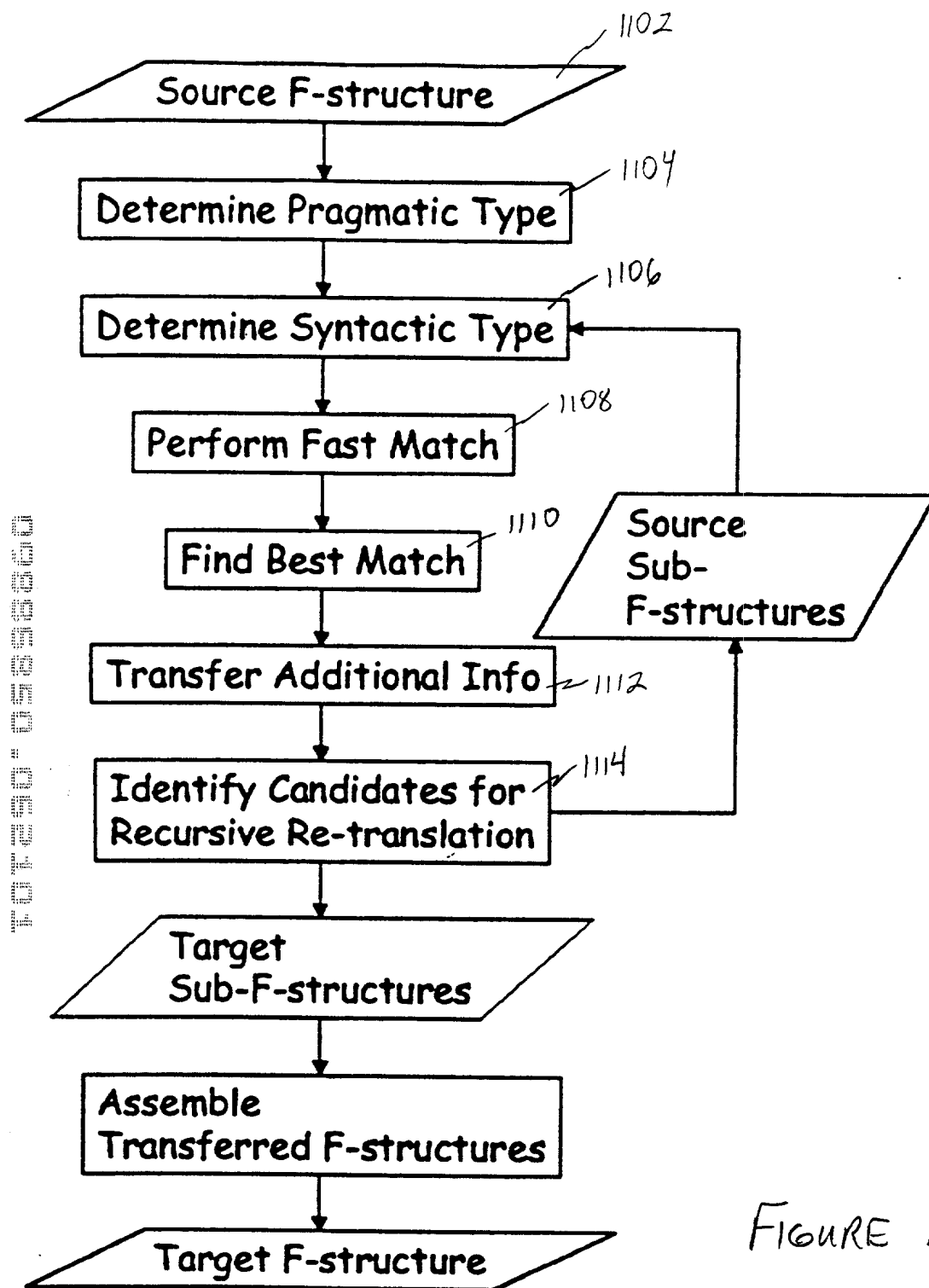


FIGURE 11

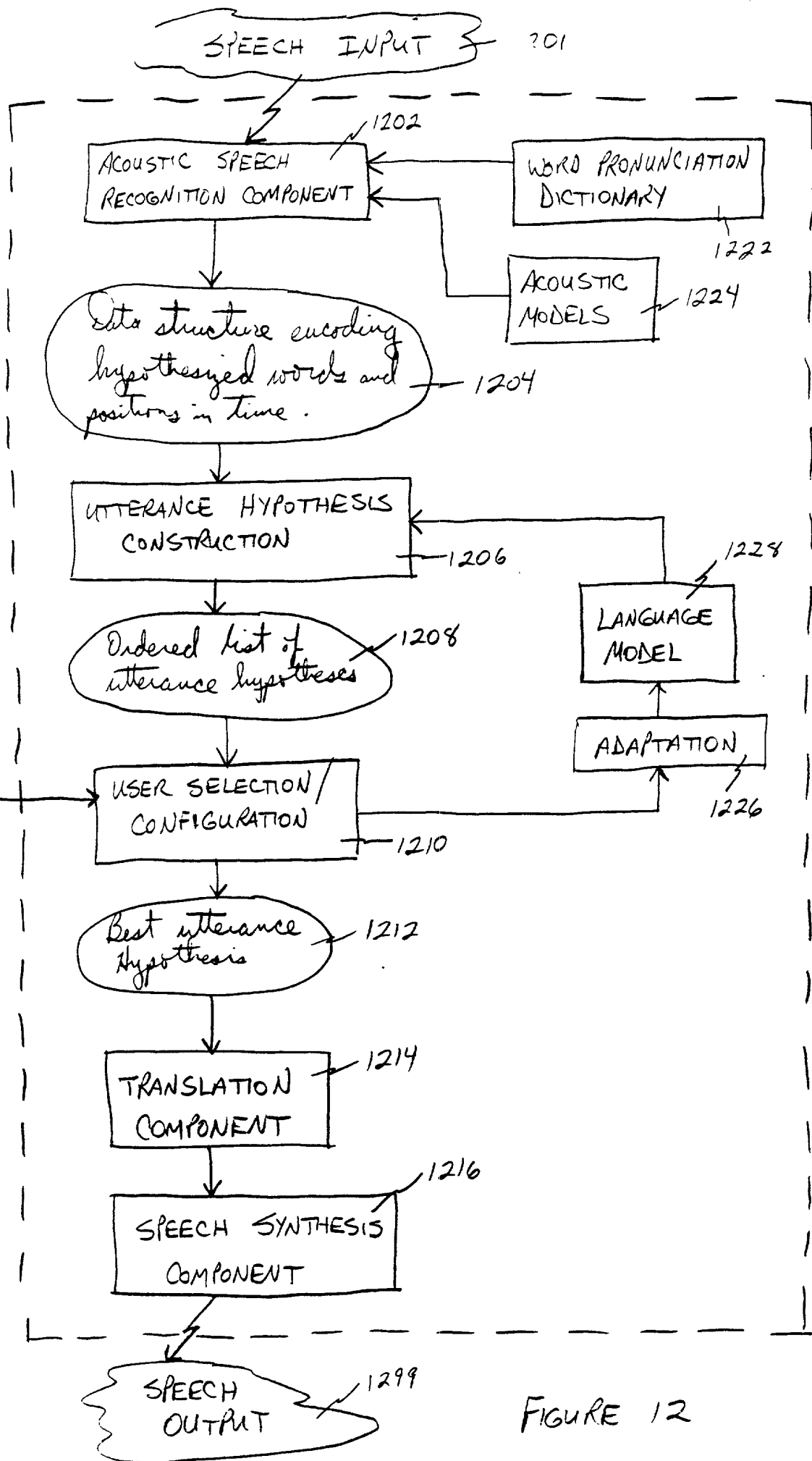


FIGURE 12

Figure 1

FIG. 1 is a block diagram of a system for processing speech input.

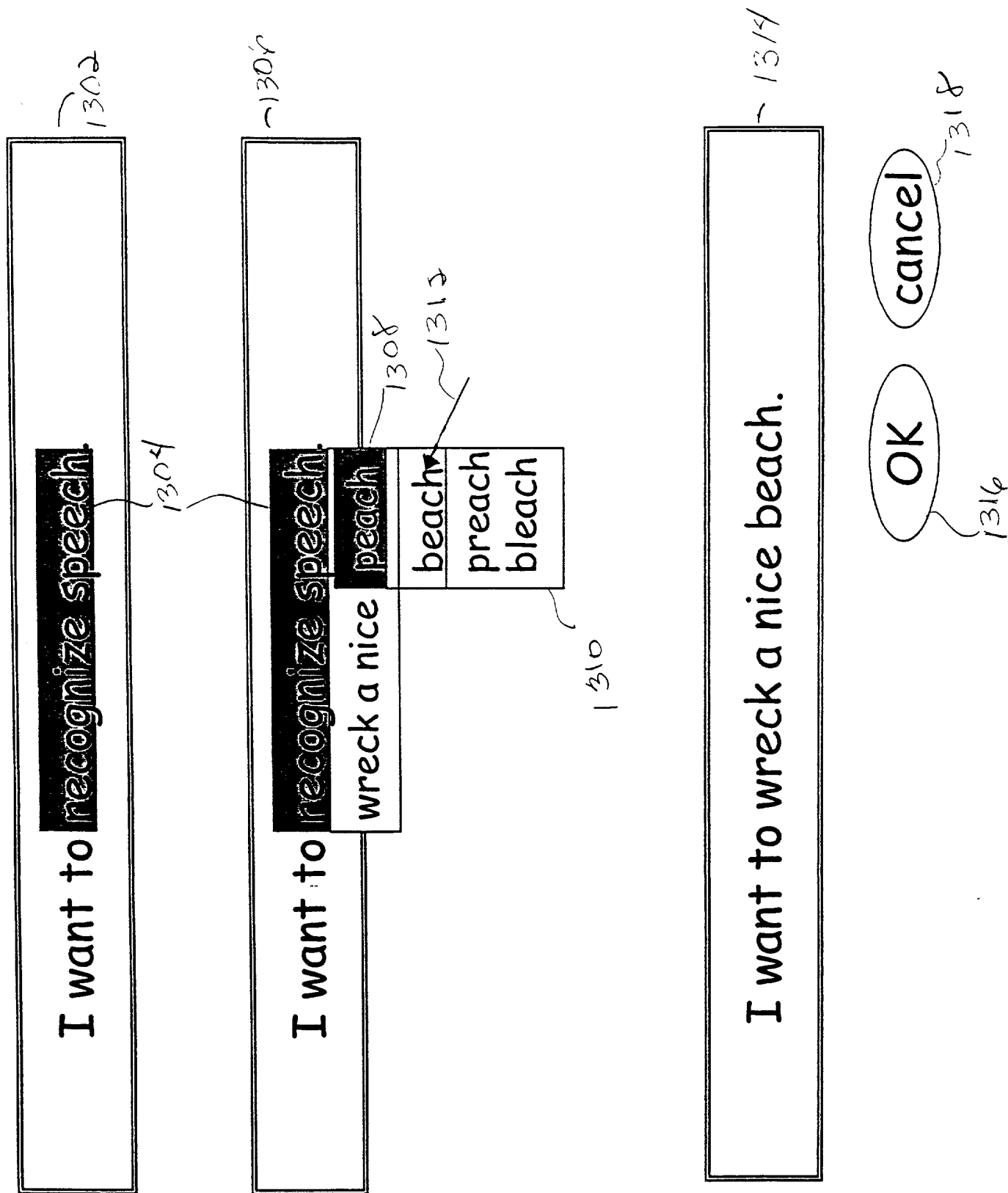


Figure 1-4

“too” session

I want to recognize speech. {1404  
私は音声を認識したい

I want to wreck a nice peach. {1405  
私は素敵な桃を破壊したい

**I want to wreck a nice beach.** {1408  
私は素敵なビーチを破壊したい

I want to wreck a nice beach. 1414  
私は素敵なビーチを破壊したい

OK 1416  
cancel 1418

Figure 15

1504

FIG. 15

I want to recognize speech.

私は音声を認識したい

1502

I want to

recognize speech.

wreck a nice

peach

beach  
preach  
bleach

1512

1514

1510

1508

1506

I want to wreck a nice beach.

私は素敵ないちを破壊したい

1516

OK

cancel

1518

1519

Figure 16

10150"033300

I want to recognize speech.

私は音声を認識したい

"I would like to understand speech"

1602

I want to wreck a nice peach.

私は素敵な桃を破壊したい

"I would like to destroy a good peach"

1604

**I want to wreck a nice beach.**

私は素敵なビーチを破壊したい

"I would like to destroy a good beach"

1606

1608

I want to wreck a nice beach.

私は素敵なビーチを破壊したい

"I would like to destroy a good beach."

1610

OK

cancel

1612

1617



Figure 17

"T01230" 03333333

I want to **recognize speech.**

私は音声を認識したい

"I would like to understand speech."

1702

I want to

**recognize speech.**

wreck a nice

**peach**

beach

preach

bleach

1704

1708

1712

1710

I want to wreck a nice beach.

私は素敵なビーチを破壊したい

"I would like to destroy a good beach."

1714

OK

cancel

1718

1716

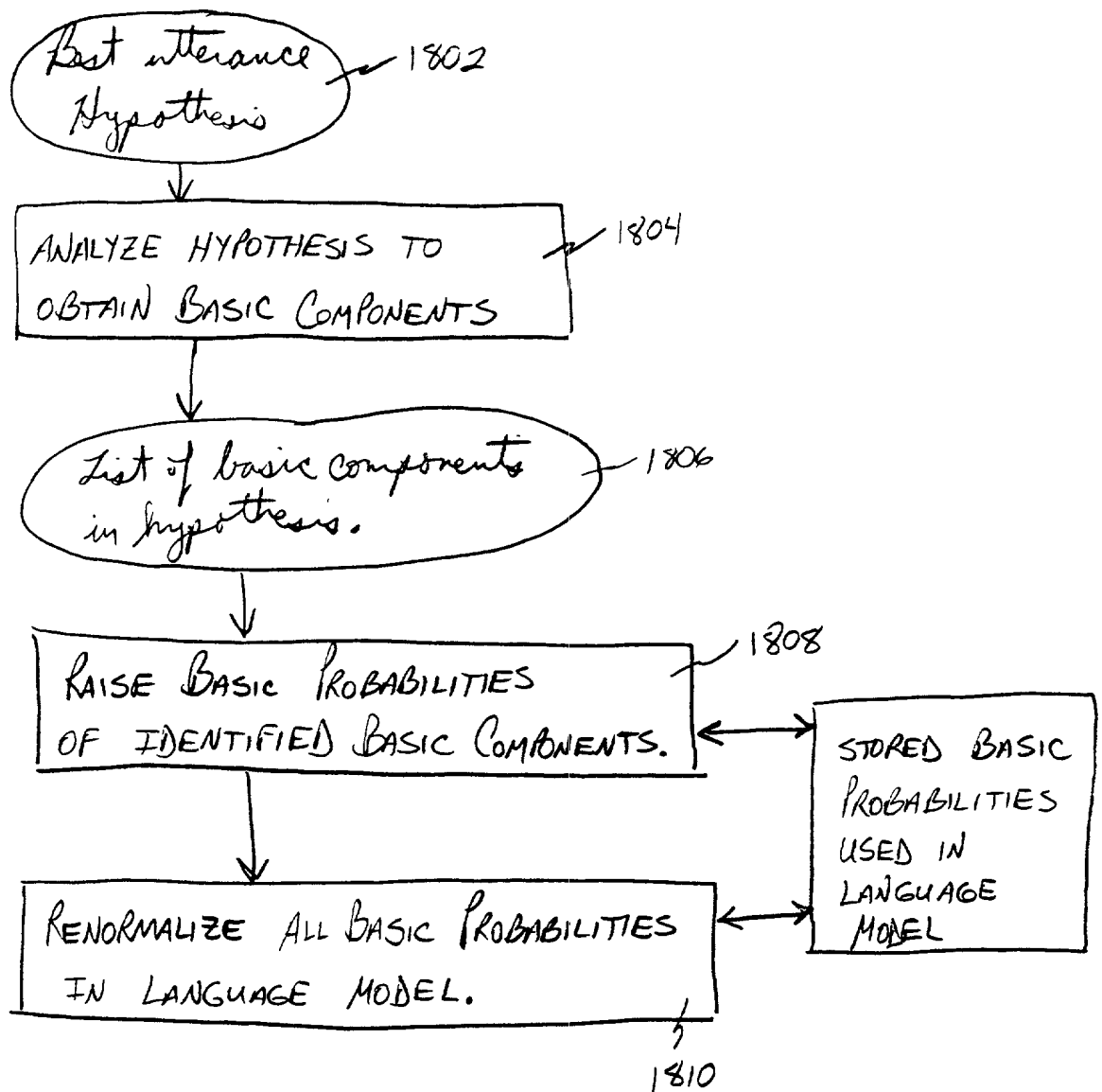


FIGURE 18



FIGURE 19

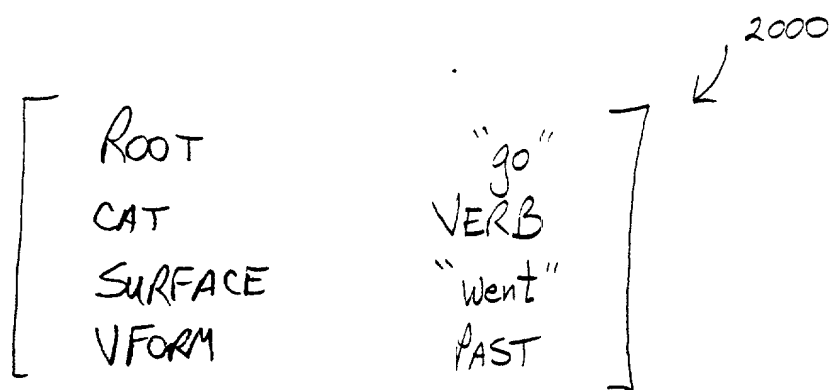


FIGURE 20

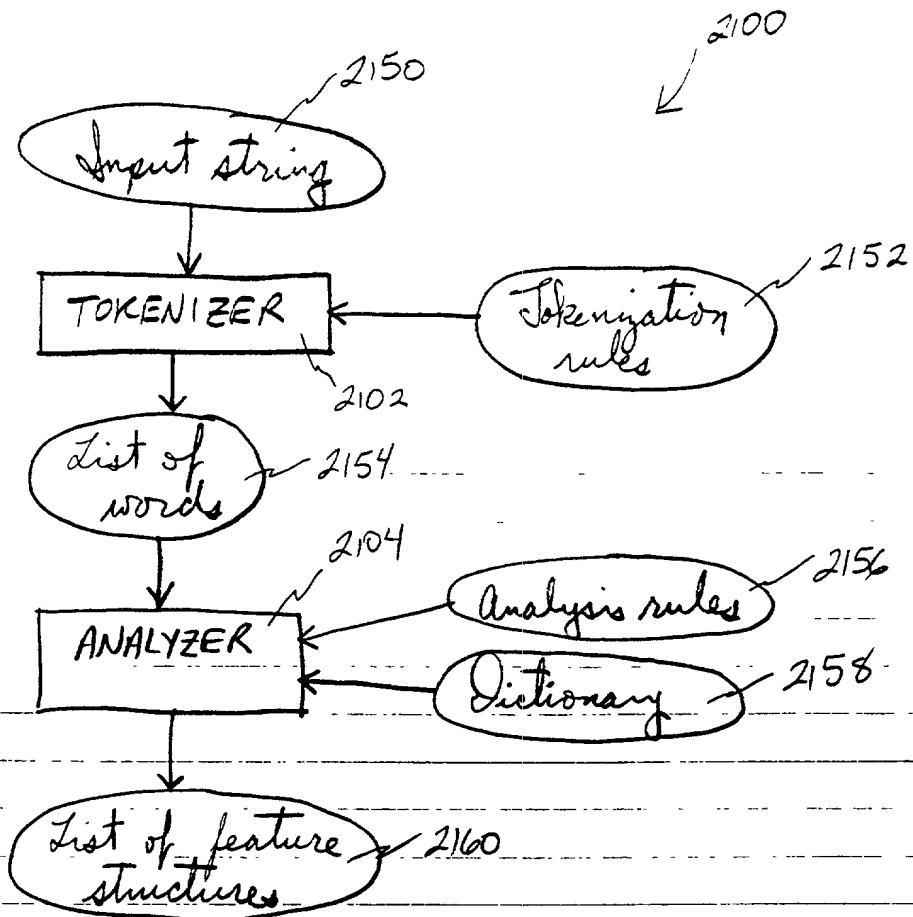


FIGURE 21

INPUT <sup>2202</sup>

OUTPUT <sup>2204</sup>

*apples*

ROOT  
CAT  
NUMBER

"apple"  
NOUN  
PLURAL

*leaves*

\*OR\*

ROOT  
CAT  
PERSON  
NUMBER

ROOT  
CAT  
NUMBER

"leave"  
VERB  
3RD  
SING

"leaf"  
NOUN  
PLURAL

FIGURE 22

2302

Inflection Type	Feature to trigger Generator or for Analyzer to create
past-tense form of verbs	(VFORM PAST)
past participle form of verbs	(VFORM PAST-PART)
present participle form of verbs	(VFORM PRES-PART)
present-tense form of verbs	(VFORM PRES)
present-tense 1st-person singular form of verbs	(VFORM PRES)(PERSON 1)(NUM SING)
present-tense 3rd-person singular form of verbs	(VFORM PRES) (PERSON 3)(NUM SING)
past-tense 1st-person singular form of verbs	(VFORM PAST)(PERSON 1)(NUM SING)
past-tense 3rd-person singular form of verbs	(VFORM PAST)(PERSON 3)(NUM SING)
comparative form of adjectives/adverbs	(AFORM COMP)
superlative form of adjectives/adverbs	(AFORM SUPER)
adverbial form of adjectives	(ADVERBIAL +)
plural form of nouns	(NUM PLURAL)
genitive form of nouns	(CASE GEN)

FIGURE 23

2402

Feature-Value Pair	Inflection Rules Applicable	Examples	Notes
CONS-DBL +	present-participle (VERB), past-tense (VERB), past participle (VERB), comparative (ADJ/ADV), superlative (ADJ/ADV)	"running", "submitted", "bigger"	Double final consonant and apply appropriate default rule. If the final consonant is "k", change it into "ck" instead of "kk".
Y-TO-I +	past-tense (VERB), past-participle (VERB), present-tense 3rd-person singular (VERB), plural (NOUN), comparative (ADJ/ADV), superlative (ADJ/ADV)	"studied", "studies", "candies", "tidier", "tidiest"	Change the final "y" to "i" and apply appropriate default rule.
F-TO-V +	plural (NOUN)	"leaves", "thieves"	Change the final "f" to "v" and apply appropriate default rule.
FE-TO-VE +	plural (NOUN)	"knives", "wives"	Change the final "fe" to "ve" and apply appropriate default rule.
AD-INFL +	comparative (ADJ/ADV), superlative (ADJ/ADV)	"faster", "fastest"	Generate inflected forms only if this feature exists. Otherwise, use "more"/"most" instead.
NO-COMP-SUPER +	comparative (ADJ/ADV), superlative (ADJ/ADV)	"right", "wrong"	Do not form a comparative or superlative if this feature exists.
ADJ-TO-ADV +	adverbial (ADJ)	"kindly", "greatly"	Generate adverbial form only if this feature exists.
ZERO-PLURAL +	plural (NOUN)	"love"	Do not form a plural if this feature exists
ZERO-SING +	plural (NOUN)	"trousers"	Always treat the word as plural. Do not use a singular determiner, etc.

FIGURE 24



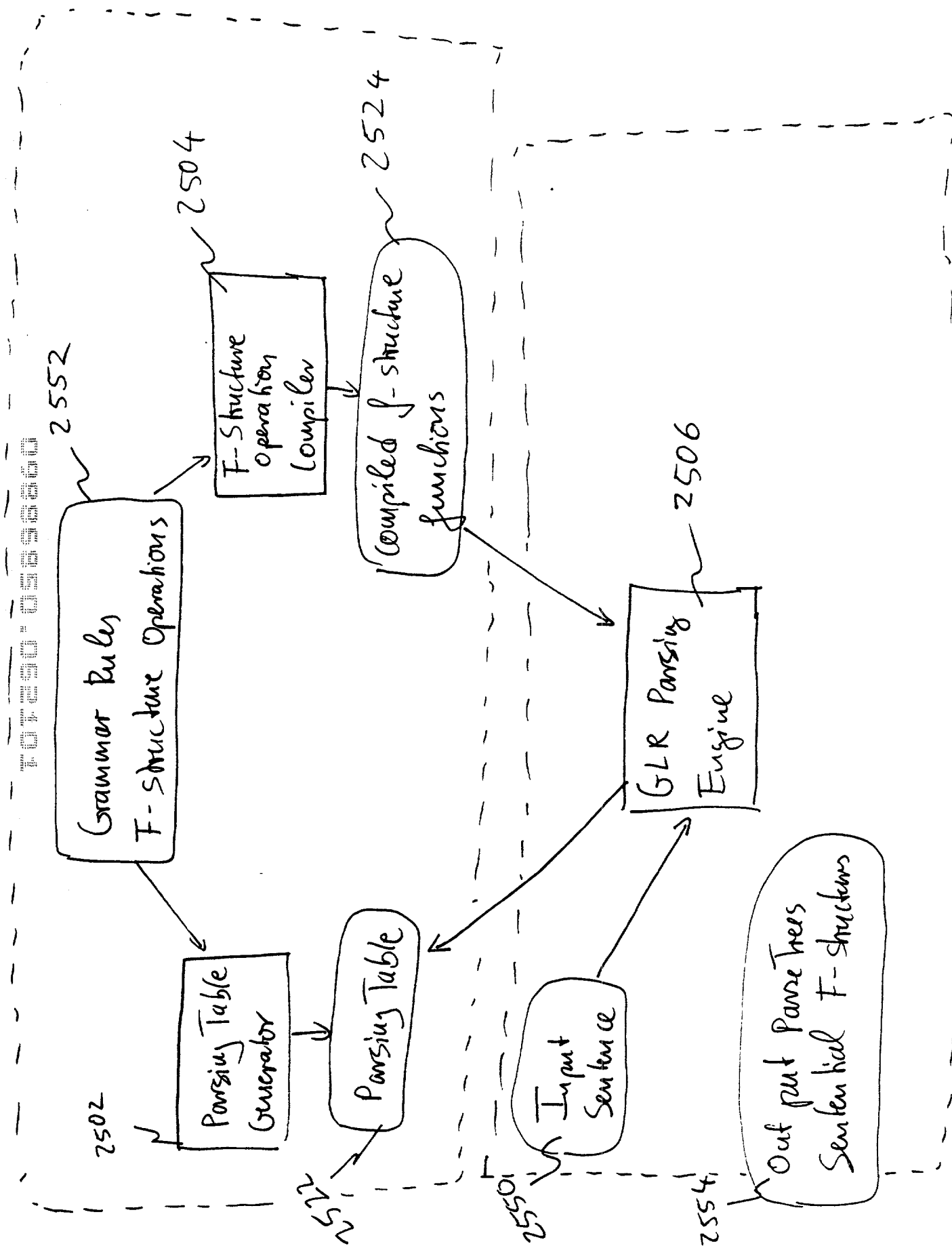


Figure 25

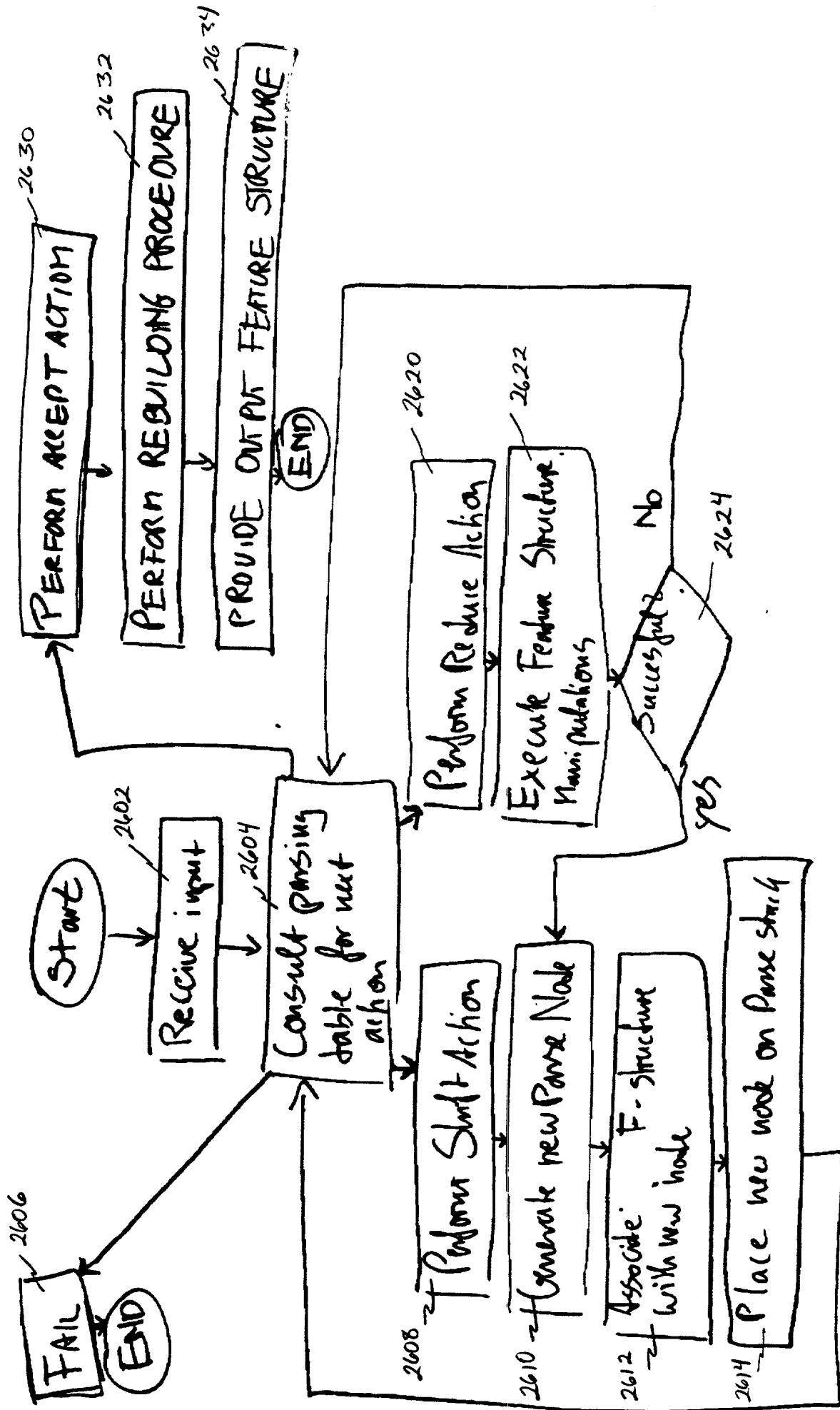


FIGURE 26

